


Twenty years of catching the next wave

The inaugural editions of *Tech Trend Notes*, the predecessor to *The Next Wave* (TNW), were small publications with few articles. Yet in their limited space, those early editions covered coming advancements in communications, networking, and information processing technologies. Perhaps most intriguing were articles on the revolution in wireless communications and personal computing that would lay the groundwork for the technological development of the next 20 years. For example, the first edition in June 1992 reported on the design and deployment of “multi-platform, multi-waveform radio,” known today as software-defined radio. Unknown at the time, *Tech Trend Notes* was a look into the future.

Likewise, looking back 20 years at NSA’s Technology Transfer Program (TTP), shows a small, struggling effort with a very limited portfolio of patented technology. A search of the US Patent and Trademark Office turns up only five (unclassified) patents issued between 1977 and 1992. However, these patents reveal a glimpse at what the portfolio has become today. For example, one patent issued in 1989 deals with planar optical logic, an optically controlled laser device for performing digital logic functions. Jump to 2012 and the TTP licensed a very large bundle of advanced photonics patents that describe breakthrough methods of silicon wafer manufacturing for optical devices.

The TTP now manages a portfolio of over 209 patents available for license in over 10 core areas including acoustics, advanced mathematics, communications, computer technology, information

processing, microelectronics, networking, optics, security, and signals processing. From 2000–2011, NSA’s TTP had a nationwide economic impact of \$118 million including \$70 million in value-added economic benefit, labor income of \$58 million, and tax revenue of \$17 million. Over 900 jobs were created or retained as a result of the TTP activities during this period.^a

From its humble beginnings as *Tech Trend Notes*, TNW has matured into a professional electronic journal that highlights significant technical advancements within NSA’s Research Directorate and beyond. In similar fashion, NSA’s TTP has grown from a virtually unknown program to a highly successful mechanism for transferring taxpayer-funded research back to industry, providing economic income, and creating jobs. One can only imagine what TNW and the TTP will look like in 2033. 

a. TechLink and Bureau of Business and Economic Research. “National economic impacts from DoD license agreements with U.S. industry 2000–2011.” 2013 Feb. Available at: <http://static.techlinkcenter.org/techlinkcenter.org/files/economic-impacts/DoD-Economic-Impact-Final-2.13.pdf>